Texas Department of Transportation

DEWITT C. GREER STATE HIGHWAY BLDG. • 125 E. 11TH STREET • AUSTIN, TEXAS 78701-2483 • (512) 463-8585

June 24, 2002

Mr. Ed Thomas, Chief
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Dear Mr. Thomas:

In reference to a revision to Part 15 of the Commissioner's Rules regarding Ultra-Wide band Transmission Systems. ET Docket 98-153, First Report and Order, states that:

"'Ground Penetrating Radar Systems must be operated below 960 MHz or in the frequency band 3.1 – 10.6 GHz," and

"Ground Penetrating Radar System...operation is restricted to law enforcement, to fire and emergency rescue operations, to scientific research institutions, to commercial mining companies, and to construction companies."

The Texas Department of Transportation (TxDOT) manages over 180,000 lane-miles of pavement and spends over $3 billion annually on pavement construction, maintenance, and rehabilitation. We are committed to the development and implementation of innovative technologies for evaluating the condition of our pavements to ensure that the users of Texas roadways have a safe, comfortable, efficient and economical highway system.

In that regard, TxDOT has made a significant investment in research and development of ground-coupled and non-contact ground penetrating radar (GPR) technology. We own and operate two non-contact van mounted GPR systems that are used for non-destructive evaluation of pavement structures. Two additional non-contact van mounted GPR systems have been purchased. We currently use two brands of non-contact GPR antennas (Wavebounce and Pulse Radar). Both of these GPR systems have very similar functional characteristics with the following parameters:

- central frequency of 0.96 GHz,
- the system Effective Isotropic Radiated Power EIRP power of –30dBm, and
- bandwidth of 1.24 GHz.

TxDOT has successfully used both ground-coupled and non-contact GPR technologies to evaluate subsurface pavement conditions to identify where pavement repairs are needed and to identify the extent of catastrophic failures such as sinkholes. We have made arrangements with the Federal Communications Commission's (FCC) Maryland Laboratory to ship one of its non-contact antennas for FCC testing.

We respectfully request that the FCC grant TxDOT a waiver to the revision to the Part 15 ruling that restricts operation of GPR Systems within the 960 MHz to 3.0 GHz frequency range. We request that TxDOT and other State Highway agencies be included in the list of agencies, institutions, and businesses that are permitted to operate GPR systems. We also request a waiver of the advanced coordination item included in the new ruling. Finally, we request the FCC grant TxDOT a blanket coordination waiver that covers the boundaries of the State of Texas.

Sincerely,

M. W. Behrens

Michael W. Behrens, P.E.
Executive Director